

**REMARKS**

Claims 1-30 are pending.

Claims 1-30 were rejected.

The allowance of claims 5 and 20 was withdrawn.

Claims 1, 5, 16, and 30 are independent claims.

Claims 1, 5, 16, 17, 20, and 30 are amended herein.

**Allowable Matter**

The indication of allowable subject matter in claims 5 and 20 has been withdrawn based on a new ground of rejection.

**Rejection Under 35 U.S.C. § 112**

Claim 5 was rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claims the subject matter of the invention. The Office asserts that the language “a strip interposed ...; a second strip produced ..., the strips interposed between respective opposed faces of the magnet and the first portion and a second portion respectively of at least one of the grooves” is unclear and possibly confusing due to the repetition of the location of the first strip. Applicant has amend claim 5 to eliminate redundant recitation of the location of the first strip and particularly point out the first strip and the second strip with its location. Accordingly, the applicants submit that amended claim 5 is definite and respectfully request withdrawal of this rejection.

**Rejection Under 35 U.S.C. § 103(a)**

Claims 1-5, 12-14, 16-20, 27-28, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Radomski (EP 0 425 132 A1) in view of Irie et al. (US Patent No. 5, 973,435). Claims 6-8, 15, 21-23, and 29 were rejected as unpatentable over Radomski and Irie et al. in view of the ordinary skill in the art. The Office asserts that Radomski substantially discloses the claimed invention, particularly disclosing a magnet engaged between two interlaced poles' surface, the surfaces parts of an undercut groove with inner and outer flange therebetween. The

Office also asserts that Irie et al. discloses two claw pole pieces interlacing, each pole piece having a groove-formed flange portion for accommodating a magnet, and non-magnetic strip 32 made of resin (resin less hard than permanent magnet)s interposed between a face of the magnet and a portion of the groove. The Office thus alleges obvious a modified Radomski alternator configure with poles having a strip made of resin interposed between a face of the magnet and a first portion of a groove. The Office alleges the motivation for such a modification would be to provide not only means to firmly secure the magnet between poles but also to increase magnetic permeance between rotor and stator, as well as heat to provide a heat resistant means for the rotor.

The applicants respectfully traverse the rejection and submit that claim 1, as amended, is patentable over the cited references. Radomski and Irie et al., neither individually nor collectively, teach or suggest the claimed invention. Specifically, Radomski and Irie et al. do not teach or suggest "a strip interposed between a face of the magnet and a first portion of at least one of the grooves, the strip being produced from a nonmagnetic material which is less hard than the magnet and operative to dampen deformation of the pole pieces. In addition, neither reference provides the motivation to one skilled in the art to combine the references in the manner taught and claimed by the applicants. Further, even if combined, the reference fail to recite the invention claimed by the applicants.

Amended Claim 1 recites an alternator comprising two pole pieces with mutually interlaced poles, a magnet, and a strip, the poles including a first flange and a second flange forming an undercut groove therebetween that is profiled substantially axially along lateral peripheral sides of each pole body, the grooves engaging the magnet between two interlaced poles and the groove profile preventing the magnet from escaping perpendicularly from the groove, the strip interposed between a face of the magnet and a first portion of at least one of the grooves, the strip being produced from a nonmagnetic material which is less hard than the magnet and operative to dampen deformation of the pole pieces.

Radomski fails to teach or suggest use a nonmagnetic strip to dampen deformation of the pole pieces and, as the Office acknowledges, is silent as to the features of the groove. Moreover, Irie et al also fails to teach or suggest use a nonmagnetic strip to dampen deformation of the pole pieces.

Irie et al. is directed to a alternator having a plurality of claw poles, a plurality of magnets, and a magnet holder for the magnets. The magnet holder is composed if holding members connecting bands and heat-resistant members. Each of the heat resistant members is disposed between the claw poles and holding members to prevent heat transfer from the claw poles to the holding members. (Abstract) Irie et al. teaches holding members open to radially inward so that permanent magnet can be inserted through the opening and held by the bottom opposite the opening while rotor is rotated. Irie et al. goes on to teach that each of opposite sides of heat resistant members, made of for example nonmagnetic metal, is disposed between a holding member and a flange, so that holding members are not in direct contact with flange portions. The flanges hold magnet holder securely against centrifugal force during operation and increase magnetic permeance between rotor and stator. The heat resistant members prevent heat transfer from the claw poles to the holding members.

The applicant respectfully submits that the Irie et al. is distinguishable from the strip interposed between a face of the magnet and a first portion of at least one of the grooves, the strip being produced from a nonmagnetic material which is less hard than the magnet and operative to dampen deformation of the pole pieces as claimed by the applicants. As disclosed, function of the strip in Irie et al. is not in not dampen deformation of the pole pieces. First, Irie et al. indicates that the heat resistant member may be made of stainless steel. Second, the Irie et al. strip does not extend across the full length of the circumferential surface of the magnet but only a portion of the magnet surface. Thus, the magnet holder would interfere with the operation of the heat resistant member. Accordingly, the applicants respectfully submit that Irie et al. fails to provide the complementary teaching or suggestion necessary to render the claimed invention obvious.

The applicants therefore submit that claim 1, as currently presented, is patentable over the cited references. Additionally, claims 2-4, and 6-15, which depend and include all of the limitations of independent claim 1 are also believed patentable based on such dependency as well as further limitation contained therein. Independent claim 5 has been amended in a similar manner and is therefore believed patentable for the same reasons.

Independent claim 16 alternatively recites the invention as including a first strip of nonmagnetic material less hard than the magnet, the first strip interposed between a circumferential face of the magnet and the length of a first portion of at least one of the grooves,

the first portion of the groove extending parallel to the circumferential face. Thus, for the reasons above, the applicants respectfully reiterate that there is neither the disclosure nor the suggestion Radomski or Irie et al. for a first strip of nonmagnetic material less hard than the magnet interposed between a circumferential face of the magnet and the length of a first portion of a groove, the first portion of the groove extending parallel to the circumferential face.

Accordingly, Claim 16 is believed to be patentable over the prior art of record.

As claims 17-29 depend from and include all of the limitations of independent claim 16, these dependent claims are also believed patentable based on such dependency as well as further limitation contained therein.

Independent claim 30 recites the taught invention in alternative terms. Claim 30 recites, in part, a strip of nonmagnetic material less hard than the magnet, the strip interposed between the magnet and a portion of at least one of the grooves, the strip covering a circumferential face of the magnet oriented in a direction opposite to a shaft of the alternator and operative to absorb deformation of the pole pieces; and a layer of adhesive more flexible than the magnet, the layer of adhesive interposed between the strip and the magnet and operative to dampen deformation of the pole pieces. For this reason, the Applicant reiterates the remarks above and respectfully submits that claim 30 is allowable over the cited references.

Claims 6-8, 15, 21-23, and 29 were rejected as being unpatentable over Radomski and Irie et al. in view of the ordinary skill in the art. Claims 9 and 24 and 30 were rejected as being unpatentable over Radomski and Irie et al. in view of Yamada et al. (US 5,734,216). Claims 10-11 and 25-26 were rejected as being unpatentable over Radomski and Irie et al. and Yamada in view of Mitcham et al. (US 5,877,578). With respect to these rejections, each rejected claim depends from and includes all the limitations of base claim 1 or 16 respectively. Claims 1 and 16 are believed to be allowable over the prior art as explained above. Accordingly, these dependent claims are believed patentable based on claim dependency in addition to additional patentable subject matter contained in these subject claims.

#### **Reference Citation Requested**

The Office utilizes Irie et al. (US 5,973,435) in the rejection of claims. The applicants note that Irie et al. is not listed in any PTO-892 Notice of References Cited nor was the reference

submitted by the Applicants in an Information Disclosure Statement or PTO 1449. The applicants also note that Irie et al. qualifies as prior art under 35 U.S.C. § 102(e).

The present application claims priority to French patent application FR 98 12359 filed October 2, 1998. Section 102(e) prior art may be removed as a reference, if the reference is not a U.S. patent claiming the same invention, by submission of a declaration under 37 C.F.R. § 1.131 attesting to the conception and actual reduction to practice of the invention claimed prior to the effective date of the reference. Accordingly, Irie et al. may be removed as a reference by submission of a declaration under 37 C.F.R. § 1.131 attesting to the conception and actual reduction to practice of the invention claimed herein prior to the effective date of Irie et al., May 6, 1998. Nevertheless, the applicants do not submit such a 131 declaration at this time, preferring instead to patentably distinguish the claimed invention from the cited reference.


### **Conclusion**

Based on the foregoing remarks, it is respectfully submitted that all of the claims as currently pending are patentable and in condition for allowance. Reconsideration of the application and withdrawal of the rejections are respectfully requested.

In the event that a telephone conference would facilitate examination in any way, the Examiner is invited to contact the undersigned representative at the number provided.

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